Preface

Incorporating computers into audiology and hearing aid dispensing facilities has been a necessary ingredient for operating a successful audiology practice for many years. At the Division of Adult Audiology at Washington University, computers are used daily to handle scheduling; billing and collection; word processing of reports and letters; daily, weekly, monthly and annual business reports; marketing; database management; statistical analysis; scientific graphing; preparation of slides; surfing the net; and e-mail. In addition, we use computers extensively to program a wide array of digitally programmable and digital hearing aids. It is clear, that our practice would not be as successful or efficient if we did not use computers on a daily basis. In fact, earlier this year it became apparent to me that computers are so vitally important for the success of the operation of our practice that I made arrangements for each staff member to have his/her own computer.

This third issue of *Trends in Amplification* is dedicated to providing the reader with a better understanding of how computers can make the process of selecting and fitting hearing aids much easier than it was several years ago. Many readers may not remember the days when audiologists and dispensers used a calculator, or scanned rows and columns of tables to determine the prescribed grain using the various prescriptive formulas. Now, we simply enter the data into the computer and the software, in milliseconds, calculates the prescribed frequency/gain response and output. With the help of some programs, the dispenser can enter information about the tubing and earmold characteristics and the program will automatically calculate how these variables will change the coupler response necessary to achieve the prescribed insertion gain. With other programs the audiologist can enter the type of hearing aids (BTE, ITE, ITC or CIC) and the program will calculate and display corrections for differences in microphone placement and the depth of placement of the receiver in the ear canal. In addition, there are other programs are available to calculate corrections for differences in the ear canal resonance as a function of age.

This issue also offers the clinician a wealth of information on how several computer software packages can be used to make the process of selecting and fitting hearing aids more accurate and easier to accomplish. These programs can not guarantee a better fit, but they can allow for greater accuracy in obtaining the prescribed fit.

This issue is authored by Robert de Jonge, Ph.D., who is Professor of Audiology in the Department of Speech Pathology and Audiology at Central Missouri State University (CMSU) in Warrensburg, Missouri. Dr. de Jonge has been a close friend since we both graduated from the University of Illinois in Champaign-Urbana (he in 1976 and I in 1975). Upon graduating from Illinois, Bob joined me in teaching undergraduate and graduate courses in audiology at CMSU. At a time when professionals seem to be changing jobs at a pace slightly greater than companies changing the processing speed of computers, Bob has remained at CMSU for his entire professional career. He is highly respected by his students and colleagues at CMSU and by professionals in the United States and Europe. Dr. de Jonge has authored two chapters in textbooks and published over 10 journal articles. He has also made numerous presentations at professional meetings in the area of computer applications for selecting and fitting hearing aids, immittance audiometry and diagnostic audiology.

Michael Valente, Ph.D.
Editor-in-Chief